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Proceedings - 2014 2nd International Symposium on Computing and Networking, CANDAR 2014
 27 February 2015, Article number 7052248, Pages 567-571
 2nd International Symposium on Computing and Networking, CANDAR 2014; Shizuoka; Japan; 10 December
 2014 through 12 December 2014; Category number E5458; Code 111184

The proposal of partial sharing for link-sharing method of buffer in NoC router (Conference Paper)

 Fukase, N.^a [✉](#), Miura, Y.^a [✉](#), Watanabe, S.^a [✉](#), Rahman, M.M.H.^b [✉](#)
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Abstract

The memory is shared between multiple physical links by using the multi-port memory in the link sharing method of the wormhole routed network-on-chip architecture. By this link sharing method the communication performance is substantially improved with extra hardware cost. In this paper, we propose a partial sharing method of a memory by two physical links. It is shown that this limited capacity of memory sharing in this proposed partial sharing method significantly reduces the hardware cost with slight declination of hardware cost. © 2014 IEEE.

Author keywords

Interconnection network Multi-port memory Network-on-chip (NoC) Router

Indexed keywords

 Engineering controlled terms: Computer architecture Costs Hardware Interconnection networks (circuit switching)
 Routers Servers VLSI circuits

Communication performance

Hardware cost

Limited capacity

Link-sharing

Memory-sharing

Multi-port memory

Network-on-chip(NoC)

Wormhole routed networks

Engineering main heading: Network-on-chip

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 ISBN: 978-147994152-0
 Source Type: Conference Proceeding

 DOI: 10.1109/CANDAR.2014.64
 Document Type: Conference Paper
 Sponsors: Hiroshima University

Original language: English

Publisher: Institute of Electrical and Electronics Engineers Inc.

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